

SECTION 01565

INTEGRATED PEST MANAGEMENT

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section specifies pest control within limits of this Contract prior to Construction activities and site preparation.
- B. CONTRACTOR will not proceed with the work of this section until any and all approvals or permits required by local, state or federal agencies have been granted.
- C. CONTRACTOR will not proceed with construction activities until pest control measures are in place.
- D. The CONTRACTOR is responsible for the control and elimination of harmful and nuisance pests on MBTA construction sites.
- E. The CONTRACTOR will respond to complaints of pests that are caused by construction activities and will respond to unanticipated pest problems that occur as a result of construction.
- F. For the purpose of this specification a Pest is generally defined as the following:
 - 1. Populations of rodents, rats, mice, raccoons, feral cats, squirrels, coyotes and other small mammals and associated nesting animals with ranges or habitats within the construction site limits/boundary;
 - 2. Individual or swarms of ants, spiders, winged swarmers, roaches, and stinging insects such as bees/wasps or mosquitos; and
 - 3. Birds and bats.

CONTRACTOR is informed that certain pests, including birds, mosquitoes, bed bugs, snakes, bats, vertebrates that are not commensal rodents, termites, or other wood destroying organisms may have specialized requirements for prevention and extermination.

- G. The CONTRACTOR is responsible for developing an effective Integrated Pest Management (IPM) Plan that will result in environmentally sound pest suppression and prevention through the use of a variety of technological and management practices. Environmental control strategies will include, but not necessarily be limited to:
 - 1. Structural and procedural modifications to reduce food, water, harborage, and access used by pests;
 - 2. Non-pesticide technologies such as trapping and monitoring devices;

3. Pesticide compounds, formulations, and application methods, if needed, that present the lowest potential hazard to humans, domestic pets, and the environment; and
 4. Scheduled monitoring to evaluate the effectiveness of the program and need for additional measures.
- H. All work must be in compliance with the regulations identified in Section 1.4 of this specification, in addition to any state, federal or local regulations or ordinances governing health, safety, or the environment applicable for the scope of work requested.
- I. The CONTRACTOR is responsible for establishing and maintaining an online repository for the public's use in filing complaints about pests or the application of pest control measures.
- J. Work of this section shall not proceed until written release is issued by the Owner.

1.2 RELATED SECTIONS

Other specification sections that relate to the work include, but are not limited to, the following:

1. Section 00100 - NOTICE TO BIDDERS
2. Section 00700 - GENERAL CONDITIONS
3. Section 01560 - TEMPORARY CONTROLS
4. Section 01567 - HEALTH AND SAFETY
5. Section 01568 - CONSTRUCTION SAFETY
6. Section 02100 - SITE PREPARATION
7. Section 02221 - DEMOLITION
8. Section 02513 - BITUMINOUS CONCRETE PAVEMENT
9. Section 02910 - LANDSCAPING

1.3 DEFINITIONS

A. Applicator (Pesticide Applicator) - Refer to 333 CMR 2.03(4) and 333 CMR 10.02:

1. Certified Applicator: An individual who is certified as authorized under the provisions of 333 CMR 10 et. seq., as authorized to use or supervise the use of any pesticide, which is classified by the Department as being for restricted or state limited use.¹
2. Commercial Applicator: A Certified Applicator, who uses or supervises the use of any pesticide, which is classified by the Department as being for restricted or state limited use for any purpose or on any land other than provided in 333 CMR 10 et. seq;
3. Licensed Applicator: An individual who is licensed as authorized to be present while pesticides classified by the Department as being for restricted use are being applied under the direct supervision of a Certified Applicator, or to use or to be present to supervise the use on land of another for hire

¹ 333 CMR 2.03 Definitions

any pesticide classified by the Department as being for general use.

- B. Biological Controls - A pest management technique that reduces the pest population by introducing nature enemies, including predators, parasitoids, and pathogens.
- C. Contractor - Entity performing the construction project who may engage the "Applicator" or "Pest Control Contractor" to adhere to this specification.
- D. Chemical Controls - A pest management technique, which includes the use of pesticides or poison.
- E. Cultural Controls - A pest management technique that eliminates or discourages populations of pests from inhabiting an area. Examples include, but may not be limited to, selecting pest resistant vegetation or measures to attract non-nuisance species to prey on mosquitos, such as dragonflies or bats.
- F. Department - The Department of Agricultural Resources.
- G. Owner - The Massachusetts Bay Transportation Authority (MBTA) or duly authorized representative.
- H. Environment - Includes water, air, land, and all plants and man and other living animals therein, and the interrelationships that exist among these.
- I. Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) - A federal regulation that provides federal control of pesticide distribution, sale, and use.
- J. Federally Registered Pesticide - A pesticide that is registered pursuant to FIFRA.
- K. Integrated Pest Management (IPM) Plan - A process for minimizing the impacts and/or control of vectors and pests (including but not limited to small mammals and/or insects) that may result from construction activities.
- L. Massachusetts Pesticide Control Act (MPCA) - A state regulation that controls the labeling, distribution, sale, storage, transportation, use and application, and disposal of pesticides in the Commonwealth of Massachusetts. The Massachusetts Pesticide Control Act is Chapter 132B of the Massachusetts General Laws. This law placed pesticide regulatory authority with the Massachusetts Department of Agricultural Resources (DAR). The Pesticide Control Regulations, which include use and licensing requirements, are Chapter 333 of the Code of Massachusetts Regulation (333 CMR).
- M. Safety Data Sheets (SDS) - An SDS is a written document that outlines material information and associated hazards for handling and working with chemicals as set forth in 29 CFR 1910.1200(g) of the OSHA Hazard Communication Standard. Current SDS documents contain physical and chemical property information, potential hazard information, emergency procedures, and manufacturer contact information.

- N. Pest - For the purposes of this specification "Pest" is generally defined as described in Section 1.1(C). A pest is an organism, which has characteristics that are or can be injurious or unwanted, and/or can impact plants, animals or humans through direct contact or as a parasite. An animal can also be a pest when it causes damage to a wild ecosystem or carries germs within human habitats. 333 CMR 2.03 defines Pest as an "insect, rodent, nematode, fungus, wood, or any other form of terrestrial or aquatic plant or animal life or virus, bacterium, or other micro-organisms, except viruses, bacteria or other micro-organisms on or in living man or other living animal."
- O. Pest Control Contractor - See "Applicator."
- P. Pesticide - A substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, and any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant; provided that the term "Pesticide" shall not include any article that is a "new animal drug" within the meaning of Section 201(w) of the Federal Food, Drug and Cosmetic Act [21 U.S.C. sec 321(w)], or that has been determined by the Secretary of the United States Department of Health, Education and Welfare not to be a new animal drug by regulation establishing conditions of use for the article, or that is an animal feed within the meaning of Section 201(x) of such act [21 U.S.C. sec 321(x)].²
- Q. Physical Controls - A pest management technique that kills pests directly or makes the environment unsuitable for pests, through methods such as trapping or the use of physical barriers, such as screens.
- R. Standard Written Notification - Written notification to Public Health Personnel, local government officials and/or sensitive community receptors (including but may not be limited to schools, daycare facilities, hospitals) on the use of pesticides within designated areas from the construction project (includes the following information: the approximate dates on which the spraying, release, deposit or application of a pesticide shall commence and conclude; the specific location of the anticipated application; the product name and type of each pesticide to be used; an Owner-approved fact sheet and United States Environmental Protection Agency registration number for each pesticide; a description of the purpose of the pesticide application; and an Owner-approved statement describing ways to minimize exposure, and precautions to be taken, especially for sensitive individuals such as children, the elderly, pregnant women, and those with health problems).
- S. Pest Control Contractor - A commercial entity hired by CONTRACTOR who is fully licensed and/or certified by the Department and who is responsible for the preparation and implementation of all the Integrated Pest Management Plans for the duration of the construction project. Unless otherwise prescribed by its labeling, a pesticide may be applied by a person working under the direct supervision of a Certified Applicator. Under these circumstances, the pesticide must be applied by a competent person acting under the instructions of a

² 333 CMR 2.03 Definitions

Certified Applicator, and the Certified Applicator is responsible for the pesticide applications made by the at person.

- T. Vector - Any organism that is capable of carrying disease pathogens from one animal, human, etc. to another.³

1.4 REFERENCES

- Massachusetts General Law 132B, Massachusetts Pesticide Control Act
- Chapter 333 of the Code of Massachusetts Regulations (333 CMR), The Pesticide Control Regulations
- 333 CMR 2.00 General Information
- 333 CMR 8.00 Registration of Pesticide Products
- 333 CMR 9.00 Licensing of Pesticide Dealers
- 333 CMR 10.00 Certification and Licensing of Pesticide Applicators
- 333 CMR 11.00 Rights of Way Management
- 333 CMR 12.00 Protection of Groundwater Sources of Public Drinking Water Supplies from Non-Point Source Pesticide Contamination
- 333 CMR 13.00 Standards for Application
- 333 CMR 14.00 Protection of Children and Families from Harmful Pesticides
- Integrated Pest Management Program, Contract Guide Specification
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) website, US Environmental Protection Agency, www.epa.gov/oecaagct/lfra.html codified as 40 CFR Parts 150-189
- Massachusetts Executive Order 403, Integrated Pest Management for Massachusetts State Agencies (E.O. 403)
- Massachusetts Hazardous Waste Regulations, 310 CMR 30.0000
- Massachusetts Contingency Plan, 310 CMR 40.0000
- Toxic Substances Control Act (TSCA), Ch. 40 Code of Federal Regulations (40 CFR Chapter I, Subchapter R)

1.5 ROLES AND RESPONSIBILITIES

1.5.1 Owner

The Owner shall ensure implementation of this Standard and its requirements for Construction Projects conducted on MBTA owned or operated sites. The Owner shall

³ United States Center for Disease Control (CDC) *The Local Board of Health Environmental Health Primer "Vector Control Factsheet."* May 22, 2017
https://www.cdc.gov/nceh/ehs/nalboh/factsheets/vector_control.pdf

ensure that the CONTRACTOR properly oversees and completes all measures set forth in this specification and shall review and authorize all IPM Plans submitted by the CONTRACTOR prior to implementation of work associated with pest control at MBTA Construction Projects. The Owner shall also review all proposed Construction Projects to incorporate, where feasible, those design and construction techniques that will help prevent future pest problems.

1.5.2 CONTRACTOR

The CONTRACTOR is responsible for hiring a Pest Control Contractor that is properly licensed and certified by the Department. The CONTRACTOR will provide the Owner with the following information prior to engaging a Pest Control Contractor for the Construction Project:

- A. Name of Pest Control Contractor;
- B. Evidence of Licensure and/or Certification issued by the Commonwealth;
- C. Copy of general liability insurance certificates;
- D. References from similar projects that were serviced by the Pest Control Contractor.

The CONTRACTOR is also responsible for providing a written IPM Plan to the Owner for review and authorization prior to initiating any pest control work at the Construction Site.

1.6 QUALIFICATIONS

- A. The Pest Control Contractor must be a Certified Pesticide Applicator as defined in 333 CMR 10.02 and have a Commercial Applicator Certification. The Pest Control Contractor shall have a commercial applicator license as specified in 333 CMR 10.00, Certification and Licensing of Pesticide Application, and certified in the following:
 - 1. Ornamental and turf pest control.
 - 2. Seed treatment.
 - 3. Right-of-way pest control.
 - 4. Public health and pest and nuisance control.
 - 5. Any other category defined in 333 CMR 10.03, *Categorization of Commercial Applicators of Pesticide* as identified by the Owner.
- B. The Pest Control Contractor must have experience, qualifications and employ qualified workers on this Contract, each having experience in integrated pest management procedures, specifically cultural controls, mechanical/engineering controls, biological controls and/or chemical controls. The Owner retains the right to pre-approve certified workers.

1.6 SUBMITTALS

- A. The CONTRACTOR shall furnish all supervision, labor, materials, and equipment necessary to accomplish the monitoring, trapping, pesticide application, and pest

removal components of the IPM program.

B. The IPM Plan will include, but not be limited to, the following sections:

1. Name and contact information for the Pest Control Contractor and the IPM Team members;
2. Provisions for utilizing environmentally friendly products as a first resort before using pesticides or other potentially harmful products;
3. Company and employee qualifications/certifications to perform Pest Management Control activities, including copies of Pest Applicator Licenses and Certifications;
4. Tolerance thresholds or definitive goals for each project specific pest of concern;
5. Project specific documentation including but not limited to pest logging and reporting procedures, complaints and reports from the public, staff, employees, tenants, and MBTA personnel, as applicable;
6. Training protocols for Pest Control Contractor and any other applicable personnel;
7. Proposed frequency of inspections, visits, and activities to be performed;
8. Summary of how the effectiveness of the program will be evaluated and documented;
9. Proposed methods, materials, quantities, and equipment for service;
10. Proposed methods and schedule for monitoring and detection;
11. When applicable, the date of planned initial pesticide application and continuing service schedule for each activity location (including duration and frequency);
12. Preventative measures and maintenance that will be undertaken prior to the start of work and during construction which can include evaluation of the laydown area that may contain construction materials, construction debris, and trash;
13. An action plan for any existing infestations that is tailored to the specific species and site;
14. A site reconnaissance and evaluation of the potential effects of pest displacement and migration associated with the work and approaches for mitigation of those effects;
15. Emergency 24-hour contact information;
16. Manufacturer's application instructions for the approved toxicants used on each site;
17. Current, updated Safety Data Sheets (SDS) for any and all approved pesticides or other hazardous substances and chemicals that are, or may be, used in association with implementation of the IPM Plan;
18. Pesticides are not to be stored at construction sites without express pre-approval by the Owner. If required/requested then the IPM should include a description of temporary storage locations for pesticides prior to application, including safety, security and containment of these locations;
19. Sketch plan showing the minimum pest monitoring radius, specific locations proposed for baiting and trapping, and locations of schools, daycare facilities, hospitals, and fast food establishments and wetland resource

areas at, or adjacent to, the construction site. If such school, day care or school age child care program facility is located at or adjacent to the construction site, the CONTRACTOR is responsible for adhering to all components of 333 CMR 14.00 Protection of Children and Families from Harmful Pesticides including submitting proof to the Owner that standard written notification requirements were met.

20. Inspection Report template. At a minimum the template will include the name of the location treated, dates being covered, name(s) of Applicators, amount and types of pesticides used during the reporting period, determinable results, complaints and resolution summary, and any other comments or issues;
21. Operations Log template designed to document, at a minimum, the following methods of control and applications:
 - a) Name and Type of Control (cultural, mechanical, biological and/or chemical);
 - b) Date of Installation or Application
 - c) Place of Installation or Application;
 - d) Name of Product;
 - i. If biological/chemical include:
 - Trade name, brand name or registered name;
 - Current SDS;
 - The EPA registration number of the pesticide;
 - The amount of pesticide applied;
 - The target pest or infestation (rodents/mammals, flying insects, crawling insects, birds/bats, other, etc);
 - e) Method of application;
 - f) The certified or licensed persons who participated in the planning and execution of the application;
 - g) Accidents or incidents resulting from use of a pesticide that caused pollution;
 - h) Any illnesses or injuries caused by or suspected to have been caused by pesticides and reported to the applicator; and
 - i) Current, updated SDS for all pesticides approved for use.

C. The CONTRACTOR will submit Reports on IPM activities to the Owner after each inspection.

D. The CONTRACTOR will submit copies of the Operations Log to the Owner upon request.

E. The IPM Plan will be maintained on the Construction Site and will be available for reference or upon request. The CONTRACTOR is responsible for updating the IPM Plan to reflect any changes or modifications to the pest management approach or techniques. Any changes in approach or techniques must be submitted to the Owner for review and authorization before implementation. In addition to the IPM Plan, Post-inspection Reports and Operations Logs must also be kept on Site with the IPM and available for reference or upon request.

F. A Health and Safety Plan (HASP) addressing IPM activities that conforms to

state, local and federal regulation to the Owner a minimum of 10 days prior to initiating work.

- G. The CONTRACTOR shall submit proof to the Owner of compliance with the requirements of Massachusetts General Law Chapter 132 (B)(6B). Chapter 132(B)(6B) subsections pertain to the provision of notices to the Department, and various elected officials and municipal administrators (including posting in the newspaper) at least 48 hours prior to spraying releasing, depositing, or applying pesticides; the content of the notice and timing of submittals; and personal protective equipment (PPE) and SDS requirements. In addition, the Conservation Commission may need to be notified, if applicable if application is in a wetland resource area.
- H. The CONTRACTOR will demonstrate that the CONTRACTOR has appropriate insurance coverage as required by state and federal regulations and including financial responsibility requirements identified in 333 CMR 10.13 and will provide documentation to the Owner upon receipt of Notification to Proceed.
- I. The CONTRACTOR will assemble all records of inspections, evaluations, planning, complaints, execution and monitoring logs, and submit the complete record to the Owner at the completion of the project.

1.7 NOTIFICATIONS

- A. The CONTRACTOR shall notify the following entities at least 21 days prior to commencement of work;
 - 1. The Owner;
 - 2. Massachusetts Department of Agriculture;
 - 3. By registered mail, the Mayor or City Manager, Public Health Commission or Board of Health, and the Conservation Commission (if applicable in a wetland resource area) or local Environmental Services Department of the Municipality where the Site is located (if applicable see MGL Chapter 132B(6B)). The Notification shall contain the following information:
 - a) The method and locations of pesticide spraying, release, deposit, or application;
 - b) The approximate dates on which such spraying, release, deposit, or application shall commence and conclude (but such spraying, release, deposit, or application shall not commence more than 10 days before nor conclude more than 10 days after such approximate dates);
 - c) The type of pesticide to be used and a copy of all information supplied by the manufacturers thereof relative to the pesticide;
 - d) The Owner-approved fact sheet and US Environmental Protection Agency registration number for each pesticide;
 - e) The name, title, business address and phone number of the certified commercial applicator, certified private applicator or licensed applicator, or the CONTRACTOR, employers or employees

responsible for carrying out the pesticide spraying, release, deposit, or application.

- B. The CONTRACTOR will publish a conspicuous notice in at least one newspaper of general circulation in each city or town where the project is located at least 48 hours prior to such spraying, release, deposit, or application. Such notice will appear in the local section of the newspaper and measure at least 4 by 5 inches in size. In accordance with MGL Chapter 132B(6B) pesticide application shall not "commence less than 10 days after nor conclude more than 10 days after" the approximate dates listed in the notice. The published notice will include:
1. The method and locations of pesticide spraying, release, deposit, or application;
 2. The approximate dates on which spraying, release, deposit, or application shall commence and conclude (but such spraying, release, deposit, or application shall not commence more than 10 days before nor conclude more than 10 days after such approximate dates);
 3. A list of potential pesticides to be used;
 4. A description of the purpose of the spraying, release, deposit or application; and
 5. The name, title, business address and phone number of a designated contact person from whom any citizen may request further information.

1.8 LIABILITY

- A. The CONTRACTOR is responsible for identifying and implementing effective control and management using the least toxic method to human health and the environment.
- B. The CONTRACTOR is responsible for determining the appropriate approved pesticide or material from the list, to be used for each treatment.
- C. The CONTRACTOR shall be liable for death or injury to persons or domestic animals in the use of the pesticide(s) or other chemicals.
- D. The CONTRACTOR is responsible for any spills or releases of pesticides, chemicals, hazardous substances, hazardous chemicals, toxic substances or other materials to soil, groundwater, surface water or air at or from the construction site.

1.9 SPECIAL PROVISIONS

- A. Pesticides, chemicals, or other materials used by the Pest Control Contractor in implementation of this Item shall not be stored on the construction site without explicit permission by the Owner and submittal of a pesticide/chemical management plan to the Owner for review and approval a minimum of 15 days prior to requested storage. Unless specifically approved otherwise by the Owner, the Pest Control Contractor shall "carry in and carry out" all pesticides, chemicals and other materials necessary to perform their work, except for bait, traps, or other similar items which are intended to be left on site for active pest

management. The CONTRACTOR shall be responsible for proper use and storage of pesticides, chemicals and toxicants, or hazardous substances or chemicals to ensure that there is no instability or chemical incompatibility of the products, materials, or chemical mixtures used or present on site. If a hazardous condition occurs or could occur as a result of chemical storage, the CONTRACTOR must document the hazard and steps taken to mitigate such hazard. Should the hazard be determined to be imminent, the CONTRACTOR shall immediately notify the Owner and other local and State public safety departments for action as deemed warranted.

- B. Access to site shall be coordinated with the Owner and the Owner will inform the CONTRACTOR of any restrictions or areas requiring special scheduling.
- C. If there is evidence of either diseased individuals, or an excessive population of deer, coyotes, opossum, raccoons, skunks, feral cats or other mammals, the CONTRACTOR shall advise the Owner of what safety measures should be instituted, what public safety and regulatory agencies (local and State) should be contacted, and what alternative management measures are available.
- D. Safety and Health. The CONTRACTOR shall observe and comply with all state, local and federal environmental, health and safety regulations throughout the performance of this contract. All work shall be performed in strict accordance with all applicable Federal, state, and local environmental, health and safety requirements. Where there is a conflict between applicable regulations, the most stringent will apply. The CONTRACTOR shall assume full responsibility and liability for compliance with all applicable regulations pertaining to the health and safety of personnel during the execution of work.
- E. Special Entrance: The Pest Control Contractor shall be aware that certain areas within some areas of the construction site (such as structures, confined spaces, etc.) may require special instructions for persons entering them.
 - 1. Any restrictions associated with these special areas will be explained by the Owner.
 - 2. Uniforms and Protective Clothing: All Pest Control Contractor personnel working in or around buildings specified in this contract shall wear distinctive uniform clothing. The Pest Control Contractor shall determine the need for and provide any personal protective equipment required for the safe performance of the work.
 - 3. Vehicles: Vehicles used by the Pest Control Contractor shall be identified in accordance with state and local regulations.
- F. The CONTRACTOR will assist the MBTA as needed in community relations - including providing information, presenting alternatives for mitigation, and attending meetings with boards and neighborhood groups. The Pest Control Contractor shall provide supporting information as needed or as requested.

PART 2 - MATERIALS AND EQUIPMENT

2.1 MATERIALS

- A. Industry standard toxicants in rodent baits can be utilized and include but not limited to the following:
 - 1. Talon;
 - 2. Quintox;
 - 3. Rozol; or
 - 4. Zinc Phosphide.

Should other products be proposed for use, these products should be documented in the IPM plan for OWNER approval pursuant to Section 1.6(B) of this specification.
- B. All Pest Control Contractor vehicles must be state approved commercial vehicles, in good working condition and in compliance with U.S. DOT and Commonwealth of Massachusetts vehicle regulations.
- C. Any and all personal protective equipment (PPE) required for use must be supplied by the Pest Control Contractor and the Pest Control Contractor's employees. At a minimum the Pest Control Contractor must supply the proper PPE as identified by the safety precautions listed in the Safety Data Sheet for the products used.
- D. All labels and signage must comply with all applicable state and federal regulations concerning contents and associated warnings with products.

PART 3 - EXECUTION

3.1 IPM BASELINE SERVICES

- A. Perform and document initial site assessment (see Section 3.2);
- B. Develop and submit IPM Plan to Owner for review and comment;
- C. Implement IPM Plan;
- D. Prevent pest infestations by identifying and correcting conditions and activities that have the potential to cause pest infestation; and
- E. Eliminate pest infestations by monitoring, trapping, applying pesticides and physically removing pests.

3.2 INITIAL SITE ASSESSMENT

Prior to preparing the IPM plan and at least 10 days prior to the starting date of the contract, the CONTRACTOR will complete a thorough, initial inspection and assessment of the site. The inspection will encompass the areas within the limits of work (Zone 1) and a distance of no less than 100 feet beyond the limits of the work (Zone 2). The CONTRACTOR will identify present and/or suspected pest infestations, as indicated by live sightings and the presence of droppings, burrows, nests, and tracks. The CONTRACTOR will also identify preventative controls that can be implemented at the

site, with the goal of eliminating pest access to food, water, and areas of harborage and mitigating the potential effects of pest displacement and migration associated with planned construction work. These preventative controls should seek to eliminate the following:

- A. Dense vegetation, particularly against structures and fences;
- B. Grass and weeds that exceed 12" in height;
- C. Debris and clutter that is stored less than 12-18" away from a structure and less than 6-8" off the ground;
- D. Structural deficiencies, such as gaps, cracks and crevices;
- E. Standing water, condensate, and leaks;
- F. Exposed garbage; and
- G. Refuse containers that are not water tight or pest proof.

If the CONTRACTOR identifies or suspects a pest infestation at the site(s), a thorough site inspection by a Pest Control Contractor must be conducted and pest monitoring devices and/or traps must be installed in and around the perimeter of the site. These devices may include non-lethal devices, such as tracking tunnels, motion activated cameras, wax blocks, live trap stations, UV light, and hair traps; and, when applicable, lethal devices, such as kill traps.

3.3 INTEGRATED PEST MANAGEMENT PLANS (IPM Plans)

The CONTRACTOR will establish an IPM Plan that is tailored to each Construction Site after conducting an initial assessment of the site(s). The IPM Plan will establish management, preventive maintenance and treatment procedures for achieving long term, environmentally sound pest control. The IPM Plan will include information listed in Section 1.6 B, with a focus on:

- A. IPM Team;
- B. Company and employee qualifications/certifications/licenses to perform Pest Management services;
- C. Training protocols for CONTRACTOR and Applicator personnel;
- D. Tolerance thresholds for specific pests of concern;
- E. An action plan for any existing infestations that is tailored to the specific species and site;
- F. Preventative measures that will be undertaken prior to the start of work;
- G. The type and frequency of preventative maintenance;
- H. Plan for the laydown area that may contain construction materials, construction debris, and trash;
- I. Addressing the potential effects of pest displacement and migration associated with the work and approaches for mitigation of those effects;
- J. Frequency and time of day of inspections and activities proposed;
- K. Pest logging and reporting procedures, including complaints and reports from the public, staff, employees, tenants, and MBTA personnel, as applicable;
- L. Provisions for using environmentally friendly products as a first resort before using pesticides or other harmful products; and
- M. Quality assurance/quality control (QA/QC) protocols.

3.4 SITE INSPECTIONS AND REPORTS

- A. The CONTRACTOR will complete regular site inspections at the frequency and time specified in the IPM Plan.
- B. The inspections will encompass the areas within the limits of work (Zone 1) and a distance of no less than 100 feet beyond the limits of the work (Zone 2).
- C. The inspections will document, but not necessarily be limited to, the following:
 - 1. The number and location of living and dead pests;
 - 2. Pest indicators, such as droppings, burrows, nests, tracks, and gnaw marks;
 - 3. The species of pest and stage of life cycle;
 - 4. Current monitoring devices and traps, including the replacement of bait, monitoring devices and traps; and
 - 5. Adherence to preventative maintenance and control measures as defined in IPM Plan.
- D. The CONTRACTOR will maintain copies of assessment and inspection records on site with the IPM Plan and provide them to the Owner upon request.
- E. The CONTRACTOR will also monitor complaints and reports from the public, staff, employees, tenants, and MBTA personnel.

3.5 EVALUATION

The CONTRACTOR will complete an evaluation following each site inspection to measure the effectiveness of pest reduction efforts and submit a report to the Owner after each evaluation. The evaluation shall measure and examine the following:

- A. Any changes between current and previous site inspections and reports, including:
 - 1. Number of pests
 - 2. Species
 - 3. Stage of life cycle
 - 4. Location
 - 5. Access to food, water, and harborage
 - 6. Site access
- B. Compare pest presence and activity to tolerance thresholds as defined by IPM Plan;
- C. The effectiveness of current pest control methods;
- D. Current public health announcements about pests of concern and best management practices recommended;
- E. Complaints and reports from the public, staff, employees, tenants, and MBTA personnel of pests and public nuisance and adverse episodes of chemicals/toxicants used; and
- F. The necessity and opportunities for additional of alternative pest control measures and changes to the IPM Plan.
- G. If chemical applications are being used, assess whether a change to a non-

chemical application would be effective.

3.6 CHANGES TO THE INTEGRATED PEST MANAGEMENT PLAN(S)

- A. If an infestation is present and there is no reduction in the number of pests between three consecutive inspections or the Owner notifies the CONTRACTOR of unacceptable pest management issues at the site, the CONTRACTOR will make changes to IPM Plan. Required changes to the plan may include, but are not limited to, the following:
 - 1. More frequent and detailed inspections;
 - 2. Night inspections to fully understand the extent of the infestation;
 - 3. Additional administrative, cultural, physical and biological controls that are targeted to the specific pest and its life cycle, such as:
 - a. Increased monitoring,
 - b. Increased preventative maintenance to minimize access to food, water, and harborage,
 - c. Solicitation of complaints and reports from the staff, employees, tenants, and MBTA personnel, and
 - d. The training of staff, employees, tenants, and MBTA personnel in best practices; and
 - 4. An escalation in treatment that may include, if approved, the use of pesticides and other chemicals (see Section 3.7-3.9)
- B. The CONTRACTOR will submit the revised IPM Plan to the Owner for review and comment.
- C. If no infestation is present and pests are consistently below the tolerance threshold(s), the CONTRACTOR, in consultation with the Owner, may make reasonable changes to the Integrated Pest Management Plan that may reduce the frequency or intensity of inspections, preventative maintenance, and administrative, cultural, physical and biological controls.

3.7 TREATMENT

- A. The CONTRACTOR will use administrative, cultural, physical and biological controls to attempt to control areas of known or suspected pests prior to chemical application of pesticide or other chemical as approved. Such controls shall include good housekeeping of debris accumulating containers, closure or coverage of trash and debris containing receptacles.
- B. The CONTRACTOR will be responsible for maintaining the Operations Log for each type of control and location and/or site building or site specified in this contract. The Operations Log will be kept on-site and maintained on each visit by the CONTRACTOR. Each log or file becomes part of the final IPM Plan submitted at the end of the project. Information to be contained in the Operations Log was described in Section 1.6 (B) (19) above.

- C. Any and all pesticides to be used must be approved for use by the US EPA and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), the Pesticide Control Board and the Owner prior to use.

1. Infestation:

- a) If infestation has been found, document time, date and location of observation/finding in the IPM Operations Log. Also document immediate actions taken to prevent spread or contact with infestation including worksite restrictions.
- b) Use less-intensive application starting with physical or mechanical traps if feasible.
- c) If chemical application is warranted, post warning signs adjacent to the area of application to help avoid human or mammal exposure.
- d) Any chemical application must be pre-approved for use by the Massachusetts Pesticide Control Act, FIFRA and Owner.
- e) Apply materials in strict accordance with EPA approved label directions and the Massachusetts Pesticide Regulations.

3.8 SPECIAL PROVISIONS FOR RODENT CONTROL

- A. The CONTRACTOR will be responsible for adhering to the following minimum provisions for the control of rodent populations.
- B. Apply materials in strict accordance with EPA-approved label directions, and Massachusetts Pesticide Regulations.
- C. Implementation:

1. Indoor Trapping:

- a) If rodent control will be accomplished with trapping devices only, all such devices will be concealed out of the general view and in protected areas so as not to be affected by routine cleaning and other operations.
- b) Trapping devices will be checked on a schedule approved by the Owner.
- c) The CONTRACTOR will be responsible for disposing of all trapped rodents and all rodent carcasses in accordance with all local, state and federal regulations.

2. Use of Rodenticides:

- a) When rodenticides are deemed essential for adequate rodent control, the CONTRACTOR will obtain approval of the Owner prior to making any rodenticide treatment.
- b) All rodenticides, regardless of packaging, will be placed either in locations not accessible to children, pets, wildlife, and domestic animals, or in EPA-approved tamper-resistant bait boxes.

- c) Rodenticide application outside buildings and construction sites will emphasize the direct treatment of rodent burrows wherever feasible.
- d) First Application – Blitz: Apply immediately after execution of the contract and written authorization by the Owner. Use zinc phosphide or other approved toxicant/pesticide with suitable bait placed to attract the greatest number of rodents. The blitz application shall be applied prior to all other work except survey.
- e) Anticoagulants, such as Warfarin, must be applied in accordance with manufacturer's standard recommended practice and as follows:
 - i. Place anticoagulant in sealed, moisture resistant containers such as glassine, paraffin blocks, or comparable protective material, and distribute as recommended;
 - ii. Place on a moisture-resistant plate or pan, not in direct contact with earth, concrete, or masonry; protect from moisture, rain, snow and dust by bait stations or other suitable covers;
 - iii. Inspect anticoagulant bait a minimum of once each week and replenish with fresh material when necessary.
- f) Maintain accurate records of placement, type and volume of rodent baits applied.

3. Use of Bait Boxes:

- a) All bait boxes will be maintained in accordance with EPA regulations, with an emphasis on the safety of non-target organisms. The CONTRACTOR will adhere to the following 5 points:
 - i. All bait boxes will be placed out of the general view, in locations where they will not be disturbed by routine operations.
 - ii. The lids of all bait boxes will be securely locked or fastened shut.
 - iii. All bait boxes will be securely attached or anchored to ground, wall, or other immovable surface, so that the box cannot be picked up or moved.
 - iv. Bait will always be secured in the feeding chamber of the box and never placed in the runway or entryways of the box.
 - v. All bait boxes will be labelled on the inside with the CONTRACTOR's business name and address, and dated by the CONTRACTOR's technician at the time of installation and each servicing.

4. Maintenance

- a) Within 1 week after initial application, the CONTRACTOR will institute a program of maintenance to rid structures and adjacent areas, within limits of or in areas adjacent to this contract, of rodents

and prevent their migration to abutting properties. Maintenance will continue for the duration of the contract.

- i. Apply anticoagulant in the required percent mixture with suitable cereal in structures and torpedo form in open areas;
- ii. Renew toxic bait semi-monthly throughout maintenance period and as required by the Massachusetts Pesticide Bureau Requirements.

5. Cleanup

- a) Remove carcasses daily and dispose of properly in accordance with all local, state and federal laws.
- b) Upon completion of operations at the site, remove remaining exposed bait or anticoagulant packages and dispose of properly in accordance with all local, state, and federal laws.

3.9 SPECIAL PROVISIONS FOR OTHER PESTS

A. If evidence is found, provide detailed, site-specific recommendations to adequately suppress the presence of the following pests. All plans and proposals to manage these, or other pests, will be submitted in writing to the Owner for review and approval before implementation.

1. Populations of opossum, skunks, raccoons, feral cats, squirrels, coyotes and other small mammals.
2. Populations of potentially infesting species (flies, mosquitoes, bees, hornets, wasps, roaches) within the property boundaries including nests of stinging insects.
3. Birds and bats.
4. Other pests identified in the Integrated Pest Management Plan that relate to specific site conditions.

B. Small Mammals: The CONTRACTOR will be responsible for adhering to the following minimum provisions for the control of populations of nuisance mammals:

1. The CONTRACTOR will use non-pesticide methods of control wherever possible.
2. The CONTRACTOR shall develop and propose a barrier system that would prevent mammals access to the site. Such proposal will be submitted to the Owner for approval before implementation.
3. The CONTRACTOR shall deploy traps when a barrier system is impracticable or evidence that the barrier system is not effective.
4. The CONTRACTOR shall identify and report areas of harborage and then create a plan of action to mitigate those areas.

C. Insects: The CONTRACTOR shall be responsible for adhering to the following minimum provisions for the control of insect populations including nests:

1. The CONTRACTOR shall use non-pesticide methods of control wherever possible.

2. The CONTRACTOR shall apply all pesticides as "crack and crevice" treatments only, defined in this contract as treatments in which the formulated pesticide is not visible to a bystander during or after the application process.
3. Application of pesticides to exposed surfaces or as space sprays ("fogging") shall be restricted to exceptional circumstances where no alternative measures are practical.
4. The CONTRACTOR shall obtain approval of the Owner prior to any application of pesticide to an exposed surface or any space spray treatment.
5. No surface application or space spray shall be made while personnel are present.
6. The CONTRACTOR shall take all necessary precautions to ensure employee safety, and all necessary steps to ensure the containment of the pesticide to the site of application.
7. Bait formulations shall be the standard pesticide technology for cockroach and ant control, with alternate formulations restricted to unique situations where baits are not practical.
8. Sticky traps shall be used to guide and evaluate insect control efforts wherever necessary.

D. Birds and Bats: The CONTRACTOR shall be responsible for adhering to the following minimum provisions for the control of nuisance bird and bat populations and their habitats:

1. The CONTRACTOR shall identify areas where birds and bats may have nested or where droppings have been observed
2. The CONTRACTOR shall develop plans to mitigate these pests and submit them to the Owner for approval before implementation.
3. The CONTRACTOR is responsible for the proper cleanup and disposal of bird and bat droppings and guano.

3.10 MAINTENANCE

- A. The CONTRACTOR shall perform routine pest control services that do not adversely affect human health or worker productivity during the regular hours of operation on the site.
- B. The CONTRACTOR shall review and assess control techniques for the site on a weekly basis. Review and assess the devices being used and the chemical application performed and their results. Document any change in controls or additional controls used to address pests. Continue to evaluate possible management alternatives including cultural, engineered, biological, and chemical approaches if chemical applications are used, assess whether a change to a non-chemical application would be effective. Make a brief report to the Owner after each review and assessment. The CONTRACTOR shall not make any changes to Pest Management Practices or pesticides without prior review and approval by the Owner.

- C. When it is necessary to perform work outside of the regularly scheduled service time set forth in the IPM Plan, the CONTRACTOR shall notify the Owner at least 1 day in advance.
- D. The CONTRACTOR shall advise the Owner of any practices at the site that are contributing to pest management problems.
- E. The CONTRACTOR will respond within 1 day to any notifications by the Owner of pest management issues at the site or sites and will recommend a plan of action, in the form of a revised IPM Plan, to address issues observed for review and approval by the Owner.

3.11 CLEANUP

- A. The CONTRACTOR is responsible for the removal and disposal of carcasses, droppings, nests or nesting materials, traps, boxes, or any other materials or devices related to pests and their management. The CONTRACTOR will follow all local, state and federal regulations pertaining to cleanup activities including, but not limited to, those applicable to biological waste, solid waste, and hazardous waste regulations and site requirements.
- B. The CONTRACTOR is responsible for the removal and disposal of any and all materials used in implementation of the IPM Plan in addition to any and all containers of pesticides, chemicals, bait boxes, empty containers, etc. that are subject to regulation by the Pesticide Control Act, the US EPA, the Massachusetts Pesticide Control Board or any other local, state or federal regulation.

3.12 DISPOSAL

- A. The CONTRACTOR will identify all procedures and protocols to properly collect, contain, transport and dispose of all pest management related debris including carcasses, bait boxes, traps, used chemical containers, and unused chemicals in accordance with all applicable local, state or federal law. All paperwork associated with the transportation and disposal of IPM related wastes will be provided to the Owner at the completion of site activities.
- B. The CONTRACTOR will abide by all local, state, and federal regulations regarding the disposal of all pest management related debris including carcasses, bait boxes, traps, used chemical containers, and unused chemicals including waste disposal requirements for hazardous waste, hazardous materials, and pesticides.
- C. The CONTRACTOR is responsible for the removal and disposal of all solid waste, recyclables, hazardous materials, and hazardous waste that is generated by the services provided under this specification.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. The work of this section will not be measured but will be an allowance under Item No. 0213.202 PEST CONTROL. The allowance will be adjusted for the actual amount paid for the work without markup. The CONTRACTOR will furnish itemized statements of the work performed and give the Owner access to accounts, bills, and vouchers relating thereto, and unless the CONTRACTOR does furnish such itemized statements, bills and vouchers, the CONTRACTOR will not be entitled to payment for related work. The allowance shall be made to reimburse the CONTRACTOR for all services required for the work specified herein and shall cover the cost of all labor, materials, facilities, security, equipment, services, employee training and testing, permits and agreements, and health and safety requirements for implementation of the IPM program for all other vectors and pests, inclusive.

4.2 PAYMENT

- A. Payment for work of this section will be based on itemized statements furnished by the CONTRACTOR to the Owner without any mark-up for overhead or profit. No other costs will be paid for the work of this section.

4.3 PAYMENT ITEMS

| <u>ITEM NO.</u> | <u>DESCRIPTION</u> | <u>UNIT</u> |
|-----------------|--------------------|-------------|
| 0213.202 | PEST CONTROL | AN |

END OF SECTION